

Clinical Communications: Adults

FURUNCULAR MYIASIS FROM *DERMATOBIA HOMINUS*: A CASE OF HUMAN BOTFLY INFESTATION

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□ **Abstract—Background:** Travelers to tropical regions are at risk for a myriad of exotic illnesses. Malaria and dengue are diagnoses that are associated with insect bites, in particular, mosquito bites, acquired while traveling in foreign, tropical countries. Infestation with *Dermatobia hominus*, the human botfly, endemic to South and Central America, is usually transferred via a mosquito vector. The human botfly should be considered in patients who have traveled to these endemic regions and present with a mosquito bite history and non-healing skin lesions. **Objectives:** We present this case to increase awareness among emergency physicians regarding furuncular myiasis from the human botfly. **Case Report:** A 39-year-old pregnant woman presented to the Emergency Department (ED) with an intensely pruritic lesion to the right calf and mild systemic symptoms 6 weeks after travel to Belize. The lesion she thought was a mosquito bite had persisted despite escalating treatment modalities and had been incorrectly diagnosed by multiple physicians. **Conclusion:** Parasitic disease is not always a systemic process. Botfly infestation presents as local boil-like lesions that are irritating and uncomfortable. Once correctly identified, it can be easily treated in the ED. © 2012 Elsevier Inc.

□ **Keywords—**furuncular myiasis; myiasis; *Dermatobia hominus*; botfly; boil

INTRODUCTION

With the tremendous ease and availability of air travel today, infectious diseases once isolated to specific, re-

mote regions of the world can present to any United States (US) emergency department (ED). Although clinicians are likely to consider these infectious diseases in patients who are visiting from endemic regions, US citizens who vacation in exotic locations are also at risk. This case of *Dermatobia hominus*, the human botfly, which is endemic to South and Central America, is illustrative of this latter scenario and emphasizes the importance of a carefully taken travel history.

The human botfly causes furuncular myiasis, or larval infestation of the skin. The lesions present as persistent, uncomfortable boils that can be easily mistaken for abscesses. Given that methicillin-resistant *Staphylococcus aureus* (MRSA) is the most commonly identified soft-tissue infection in ED patients, the examining physician might incorrectly attribute the lesion to MRSA and treat accordingly, which will significantly delay the correct definitive care (1). Furuncular myiasis from the human botfly should be considered in the differential diagnosis of skin lesions of patients who have traveled to endemic regions.

CASE REPORT

A 39-year-old pregnant woman presented to the ED with an intensely pruritic lesion to the right calf. While hiking in the rainforest during a vacation in Belize 6 weeks earlier, the patient had felt a sudden, sharp pain. Despite

long pants, the pain was on her leg and quickly developed into a lesion that looked like a typical mosquito bite. The site then developed a central scab that healed and was replaced by a central, small hole. Since the injury, the area had remained red, indurated, and constantly itchy without improvement, despite calamine lotion, Domeboro® (Bayer HealthCare LLC, Morristown, NJ) soaks, and over-the-counter (OTC) hydrocortisone cream.

She reported nocturnal symptoms of pain and pruritis at the site. A watery odorless discharge with black debris intermittently leaked from the hole. Pruritis and tingling would usually precede the fluid leaks. The patient reported 1 week of intermittent sweats and nausea, which she had attributed to her pregnancy. She did not have any fever or chills. Two weeks before the ED visit, the patient sought treatment from a dermatologist, who prescribed a high-dose hydrocortisone cream. The pruritis temporarily improved, but the lesion continued to enlarge. A few days before ED presentation and after 2 weeks of prescription-strength (and 4 weeks of OTC) topical steroid treatment, the area became cellulitic. She started cephalexin, which had improved the erythema around the lesion. The patient was a 20-week pregnant emergency physician who denied any cigarette, alcohol, or drug use, or any significant occupational exposures.

On ED presentation, the patient was afebrile (37.1°C) with normal vital signs. Her physical examination was remarkable for a warm, mildly erythematous lesion that was tender to palpation, with a hole in the center (Figure 1). Some pulsatile movement was observed at the central hole when pressure was applied nearby. The lesion was indurated but not fluctuant. The patient's leg was neurovascularly intact distally.



Figure 1. Upon presentation, the lesion is firm, tender and erythematous with a central punctum. Healed excoriations are noted distally.



Figure 2. After occlusion of the central air vent, the larva exits in an attempt to seek an air source. In this case, the larva partially exited its subcutaneous home.

The lesion was diagnosed in the ED as furuncular myiasis caused by *Dermatobia hominus*, the human botfly. The patient occluded the air vent with a thick layer of petroleum jelly and a Tegaderm™ (3M, St. Paul, MN) for 24 h. The larva started to exit on its own (Figure 2). Then, the portion of the larva that was still in the skin was surgically removed (Figure 3).

DISCUSSION

Dermatobia hominus, the human botfly, causes furuncular myiasis. Species that cause furuncular myiasis are obligate parasites for which a living host is needed for the larval phase (2,3). *Dermatobia hominus* is found in warm, humid tropical rainforests in areas of Central and South America from Northern Argentina to Southern



Figure 3. Removal of an intact larva is critical to avoid residual foreign body reaction. The larva measures 1.7 cm.

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